Amendments to the Claims:

1. (Currently Amended) A shape memory alloy having a ~~low~~ lowered martensitic transformation temperature from said alloy's initial martensitic transformation temperature, said alloy comprising Copper and Zinc in the range of 62-86% of Copper and 10-28% of Zinc along with 6% of Aluminum and prepared by a process comprising the following steps of:
   (i) selecting an alloy comprising Copper and Zinc in the range of 62-86% of Copper and 10-28% of Zinc along with 6% of Aluminum;
   (ii) melting alloy composition in an induction furnace operating in air under charcoal cover followed by casting into desired shapes;
   (iii) homogenizing the above composition at 800^0C for a period of about two hours followed by cooling;
   (iv) surface machining for removing oxide scale formation;
   (v) analyzing the alloy composition
   (vi) re-heating the shaped material at about 575^0C for about three minutes;
   (vii) quenching said material with cold water;
   (viii) obtaining a fully martensitic structure;
   (ix) identifying the soft shape memory material with martensitic structure; and
   (x) recording the temperature and structure of the material.
2. (Currently Amended) A shape memory alloy as claimed in claim 1, wherein said alloy having a martensitic transformation temperature lowered by about 80^0C from said alloy's initial martensitic transformation temperature.
3. (Original) A shape memory alloy as claimed in claim 1, wherein said alloy displays good shape memory at a re-betatising temperature of about 575^0C.
4. (Original) A shape memory alloy as claimed in claim 1, wherein said alloy having good fatigue properties thereby preventing quench cracking.
5. (Cancelled) A shape memory alloy as claimed in claim 1, wherein said alloy once processed can be utilized for some other temperature device or application.

6. (Original) A shape memory alloy as claimed in claim 1, wherein said alloy having good shape memory response properties.

7. (Withdrawn) A process for lowering the Martensitic Transformation Temperature (As) of shape memory alloy as claimed in claim 1, by a re-betatising treatment of previously high temperature betatised material, said process comprising the following steps of:

(xi) selecting an alloy comprising Copper and Zinc in the range of 62-86% of Copper and 10-28% of Zinc along with 6% of Aluminum;

(xii) melting alloy composition in an induction furnace operating in air under charcoal cover followed by casting into desired shapes;

(xiii) homogenizing the above composition at 800^0C for a period of about two hours followed by cooling;

(xiv) surface machining for removing oxide scale formation;

(xv) analyzing the alloy composition

(xvi) re-heating the shaped material at about 575^0C for about three minutes;

(xvii) quenching said material with cold water;

(xviii) obtaining a fully martensitic structure;

(xix) identifying the soft shape memory material with martensitic structure; and

(xx) recording the temperature and structure of the material;

8. (Withdrawn) A process as claimed in claim7, wherein the martensitic transformation temperature (As) is lowered by about 80^0C.

9. (Withdrawn) A process as claimed in claim 7, wherein the loss of Zinc or Aluminum raises the martensitic transformation temperature whereas increase of these elements lowers the transformation temperature.

10. (Withdrawn) A process as claimed in claim 7, wherein material once cast and processed can be utilized for some other temperature device or application.

11. (Withdrawn) A process as claimed in claim 7, wherein shape memory response properties are not affected.

12. (Withdrawn) A process as claimed in claim 7, wherein the two-step betatising and resultant lowering of transformation temperature is valid for higher Aluminum content of 6-10 % shape memory alloys.

Respectfully submitted,

Dated: September 29, 2004

Christopher S. Casieri
Reg. No. 50,919
Attorney for Applicant

MATHEWS, COLLINS, SHEPHERD & McKAY, P.A.
100 Thanet Circle, Suite 306
Princeton, NJ 08540
Tel: 609 924 8555
Fax: 609 924 3036